



Evergreen Resources Management
2 Righter Parkway, Suite 120
Wilmington, DE 19803

July 9, 2021

VIA ELECTRONIC SUBMISSION

Kevin Bilash
US EPA Region III
Land, Chemicals & Redevelopment Division 3LD20
1650 Arch Street
Philadelphia, PA 19103

**Re: Request for Extension
IM Workplan
AOI 7 Marcus Hook Industrial Complex**

Dear Mr. Bilash:

Evergreen Resource Management Operations (Evergreen) received the Environmental Protection Agency's (EPA's) June 23, 2021 correspondence which requested that Evergreen submit an Interim Measures (IM) Work Plan for implementing IM at AOI 7 within the Marcus Hook Industrial Complex (MHIC) within 45 days of receipt of the letter. Also within the EPA's June 23, 2021 correspondence was a request to complete additional investigation activities. A conference call was held with the EPA and Sanborn Head on July 7, 2021 discussing the activities to be completed for inclusion in the IM Workplan. Evergreen has already completed some of these activities and is planning to complete additional activities starting July 13, 2021.

The scope of work discussed during July 7, 2021 conference call is summarized below:

Items Completed in May 2021

- Collection of a complete round of groundwater elevations from all accessible AOI 7 monitoring wells
- Collection of groundwater samples from all accessible wells in AOI 7 for total and dissolved arsenic, iron, and the collection of field parameters.
- Resurvey of existing AOI 7 monitoring wells located along Middle Creek.
- Survey of 2 staff gauges located in Middle Creek.
- Survey of ground surface in 3 transects across Middle Creek.

Items to be Completed July through August 2021

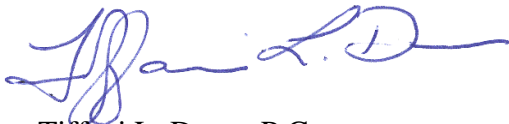
- Completion of 10 borings to 30 feet below ground surface (ft bgs). During the July 7, 2021 teleconference, Sanborn Head and the EPA reviewed the proposed locations for the borings and monitoring wells (MW), which had been sent to the EPA on July 1, 2021 and during the call the EPA agreed with the proposed boring locations. The locations of the borings are shown on Figure 1.
- Installation of 5 nested monitoring wells (shallow/deep pairs MW-536RS/MW-536D, MW-537RS/MW-537D, MW-563S/MW-563D, MW-564S/MW-564D, MW-565S/MW-565D) at the locations shown on Figure 1. The two shallow wells MW-536RS and MW-537RS are replacements for wells that are no longer accessible. In addition to the nested wells, 7 deep wells (which are paired with existing shallow wells MW-560, MW-561, MW-562, MW-509, MW-558, MW-293, MW-56) will be installed at the locations shown on Figure 1. Shallow wells will be advanced down to 15 ft bgs and all deep wells will be advanced down to 30 ft bgs to be consistent with existing shallow and deep well depths within AOI 7. As discussed with the EPA on July 7, 2021 some of the EPA's proposed locations had to be slightly modified due to accessibility issues and the EPA did not have any objections to the proposed locations of the monitoring wells shown on Figure 1. The EPA requested the addition of a shallow well to be nested with deep well MW-565D. Evergreen has agreed to the installation of this shallow well (MW-565S) which is included on Figure 1.
- In both the soil borings and monitoring well installations, soil samples will be collected every 5 feet for arsenic and iron analysis. The soil samples will be biased towards evidence of pyritic waste if observed during sampling. In addition, at the monitoring well locations, one soil sample will be collected for DRO/GRO analysis from each well location if hydrocarbon impacts are observed during sampling. If no hydrocarbon impacts are noted then a sample for DRO/GRO will be collected in the middle of the proposed screened interval.
- At locations with nested wells or co-located borings/wells, only one arsenic and iron soil sample will be collected from each depth interval and samples will be biased to ensure that they are within the screened interval for both the shallow and deep well for that nested well location. Also, where possible, samples for DRO/GRO will be collected in the same interval as the arsenic and iron soil samples.
- Collection of 2 non-aqueous phase liquid (NAPL) samples from a well of lower groundwater arsenic concentration (MW-182) and one from a well of higher groundwater arsenic concentration (MW-534L) for arsenic analysis.
- Collection of a complete round of groundwater elevations from all AOI 7 monitoring wells and staff gauges. Following collection of groundwater elevations, groundwater samples will be collected from all monitoring wells installed in July /August in AOI 7 using USEPA low-flow sampling methods. All of the newly installed wells will be sampled for total and dissolved arsenic and iron. If access can be obtained, Evergreen will also collect groundwater elevations and groundwater samples from wells within Solid Waste Management Unit (SWMU) 9, which is located on the adjacent property during the groundwater sampling activities. It is Evergreen's recollection that the EPA was going to contact the adjacent property owner to facilitate access, but if that is not the case, Evergreen can contact the adjacent property owner. Evergreen, however, no longer has the contact information for the adjacent property owner and kindly requests that the EPA provides it to Evergreen, if Evergreen is to contact them to obtain access for this sampling event. If the proposed groundwater sampling of the SWMU 9 wells will result in schedule delays, Evergreen will plan to only collect groundwater elevations from the SWMU 9 area.

- Ten of the AOI 7 monitoring wells will also be sampled for sulfate, phosphate and redox speciation of arsenic to inform the IM.

The planned field work is scheduled to start on July 13, 2021 and continue through the middle of August 2021. Evergreen is planning to have 5 day turn around for all sample analysis. Based on the proposed scope of work to be included in the IM Workplan, Evergreen is requesting an extension, so the IM Workplan would be submitted to the EPA on September 10, 2021 (assuming that access to wells in SWMU 9 is not granted by the adjacent property owner). If access to the SWMU 9 monitoring wells is granted, then Evergreen will request an additional extension for submittal of the IM Workplan depended upon the time to complete the additional field work and potential delays in coordination, which will be discussed with the EPA.

Regards,

Evergreen Resources Management Operations



Tiffani L. Doerr, P.G.

Cc: Scott Cullinan, PE, Evergreen Resources Management Operations
Colleen Costello, PG, Sanborn Head & Associates, Inc.



Draft

Evergreen, LLC
 Marcus Hook, Pennsylvania

Drawn By: H. Pothier
Designed By: C. Shepsko
Reviewed By: C. Costello
Project No: 4862.00
Date: June 2021

Figure Narrative




This figure depicts monitoring well locations and groundwater elevations collected in May 2021.

Notes






1. Monitoring well status provided by Stanport data portal
2. Aerial imagery provided by Google Earth Pro. (May 2016). Claymont, Delaware USA. 39° 48' 24.73"N, 75° 25' 50.50"W, Eye alt 4289 feet. [November 2020].
- 3.

Legend

MW-528U Location Name

-  Monitoring Well - Existing
-  Monitoring Well - Destroyed
-  Staff Gauge

Proposed Locations

-  Deep Monitoring Well
 Nested Well
 Soil Boring
 AOI 7 Boundary
 SWMU 9 Boundary

